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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,816	01/16/2004	Michael W. Murphy	8540G-000233	6583
27572	7590	05/11/2006	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			YUAN, DAH WEI D	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 05/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/758,816	<b>Applicant(s)</b> MURPHY ET AL.	
	<b>Examiner</b> Dah-Wei D. Yuan	<b>Art Unit</b> 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 07 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-49 is/are pending in the application.
- 4a) Of the above claim(s) 10-49 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03182004</u> | 6) <input type="checkbox"/> Other: _____  |

**ULTRA SHORT HIGH PRESSURE GRADIENT FLOW PATH FLOW FIELD**

Examiner: Yuan

S.N. 10/758,816

Art Unit: 1745

May 1, 2006

***Election/Restrictions***

1. Applicant's election with traverse of Group I-1, claims 1-9, in Paper filed March 7, 2006 is acknowledged. The traversal is on the ground(s) that all the species read upon embodiments shown in Figures 1-6B. This is not found persuasive because where two or more species are claimed, a requirement for restriction to a single species may be proper if the species are mutually exclusive. Different species are mutually exclusive if one claim recites limitations disclosed for a first species but not in other species. The species I-1 to I-3 are distinct for the reasons given in the Office action dated February 6, 2006 and search required for one species is not required for other species, therefore, restriction for examination purposes as indicated is proper. Claims 10-49 are withdrawn from consideration.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Morse et al. (US 6,960,403 B2).

With respect to claims 1,7, Morse et al. teach a fuel cell comprising polyimide perform laminate (which contains microfluidic interconnect ferrules (217) (gas-impermeable elements) and an active element (204,209). Each of the plurality of the spacer and the first gas impermeable element have orifices (222,223) therethrough. A flow path is established from the first manifold through the orifices over the active element to the second manifold as shown in the microfluidic fuel cell package (218). See Column 3, Line 66 to Column 4, Line 17; Figure 2.

With respect to claim 2, Morse et al. further tech the metallization to form resistive heating elements for direct control of the MEA temperature and feed through electrical connections to extract the generated electrical power from the fuel cell. A wide variety of metals can be used for conductive wires embedded as feed through to extract the electrical power from the fuel cell electrodes. See Column 4, Lines 18-41.

With respect to claim 3, the plurality of resistive heating elements (206) are electrically conductive. See Column 4, Lines 57-67.

With respect to claim 4, Morse et al. teach the use of conductive wires (fillers) embedded as feedthroughs to extract the electrical power from the fuel cell electrodes. See Column 4, Lines 18-41.

With respect to claim 5, the first manifold is substantially parallel with the second manifold. See Figure 2.

With respect to claim 6, the second plurality of spacer (217) disposed in the second manifold. See Figure 2.

With respect to claim 8, a frame is disposed between the first gas I permeable element and the second gas impermeable element. See Figure 2.


With respect to claim 9, the spacers spaced on the first gas impermeable element within the first manifold. See Figure 2.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dah-Wei D. Yuan whose telephone number is (571) 272-1295. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan, can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Dah-Wei D. Yuan  
May 1, 2006

  
**DAH-WEI YUAN**  
**PRIMARY EXAMINER**